INVESTIGATOR'S ANNUAL REPORT

National Park Service

All or some of the information provided may be available to the public

Reporting Year: 1998	**Park:** Shenandoah NP
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Permit#:
SHEN1998N-84

Park-assigned Study Id. #:
unknown

Project Title:
Impact Of Acid Rain On Geologically Sensitive Watersheds

Permit Start Date: Jan 01, 1998	**Permit Expiration Date** Jan 01, 1999
Study Start Date: Jan 01, 1982	**Study End Date** Jan 01, 1999

Study Status:
Completed

Activity Type:
Research

Subject/Discipline:
Geochemistry (inc. Minerals / Petrology)

Objectives:
To elucidate and quantify the watershed processes that regulate the composition of natural waters and document the impacts of acid rain on those processes.;To identify the changes in mineralogy during weathering of bedrock and the impacts of these reactions on water composition.;To provide long-term measurements of the chemistry of atmospheric deposition and surface water chemistry, and to identify trends or changes in each of these media.;To provide a long-term baseline of quality assured data on the major ion chemistry of atmospheric deposition and surface water chemistry for future reference.

Findings and Status:
;Plans for further research and monitoring were coordinated with Personnel from the University of Virginia (Jeff Raffensberger and George Hornberger). Sites for collection of atmospheric deposition and streamwater, and for continuous stream flow monitoring are being reestablished. Further work on the detailed mineralogy of saprolite and bedrock is being pursued as a MS project. Work on the detailed mineralogy of saprolite and bedrock is being pursued a MS project by a student from UVA and USGS personnel. Old Rag nitrate data (1982 - 1992) is being used in a coop regional (Mid-Atlantic) study of nitrate mass-balance from forested watersheds.

For this study, were one or more specimens collected and removed from the park but not destroyed during analyses?
No

Funding provided this reporting year by NPS: 0	**Funding provided this reporting year by other sources:** 10000

Fill out the following ONLY IF the National Park Service supported this project in this reporting year by providing money to a university or college

Full name of college or university:	**Annual funding provided by NPS to university or college this reporting**

	year:
n/a	0